

METHOD FOR WCDMA FRAME SYNCHRONIZATION AND RELATED DEVICE

Abstract

A method for performing frame synchronization in a WCDMA system includes first, correlating a received signal with a plurality of predetermined correlators to obtain a plurality of frame synchronization correlation results, then, coherently combining frame synchronization correlation results with a slot synchronization phase when a test phase difference is less than a threshold phase difference, or, coherently combining frame synchronization correlation results with a linear combination of slot synchronization phases when the test phase difference is greater than or equal to the threshold phase difference. The slot synchronization phase is determined by correlating the received signal with a slot synchronization sequence. Lastly, the method determines a frame boundary of the received signal based on the coherent combination results. The method accommodates for a changing signal to noise ratio to improve frame synchronization speed and accuracy.